AT&T Network Convergence and the Role of IMS

IP Driving Anytime, Anywhere Communications

As Internet Protocol (IP)-based communications continue to take hold in the U.S., the long-promised benefits of convergence are becoming a reality. Still, with so much focus on IP-based applications and devices, the true key to convergence has often been overlooked. It all starts with the network. And the network must be able to deliver applications and information anytime, anywhere, and to any IP-enabled device.

With IP-based services and a fully converged network to carry them, customers in the near future will no longer have to associate specific applications with specific devices or network connections. A full range of information and content will be accessible via a single device, and the intelligent network will deliver it over the best available connection at a given place and time.

The prospects for convergence are exciting, but bridging the gap from hype to reality requires continual innovation and a complete range of network assets – from wireless and wireline access to a powerful and advanced IP backbone network to carry information around the globe.

IMS: Enabling the Next Evolution in Communications

For the past 10 years, AT&T has pursued its vision for delivering network convergence, building the nation's most advanced IP backbone network and complete wireless and wireline access capabilities, and playing a key role in the development of IP-based applications.

AT&T was the first major U.S.-based carrier to implement IP multimedia subsystem (IMS) technology into its network. IMS is a network architecture that allows wireless and wireline networks and devices to work together and provides for standardized interfaces between applications, network layers and back-office systems. It's the glue that will enable AT&T to deliver communications virtually anytime, anywhere and on any device.

AT&T's Common Architecture for Real-Time Services (CARTS): Building From IMS

IMS is not a service – it's an architecture. And AT&T is taking IMS to a new level with its Common Architecture for Real-Time Services (CARTS) – the company's IMS platform and foundation for converged services. As it matures and deployment expands, the architecture will enable AT&T to build intelligence into its network and share information with any of the "three screens" – the PC, TV and wireless device.

IMS at a Glance

What It Is	What It Is Not
> An architectural framework	> A service
> Based on SIP and IP	> An application
> Multimedia service delivery platform	> A complete network architecture
> Standardized in 3GPP, initially for next-generation wireless network	> Limited to voice
> Very sophisticated with complex capabilities	> Completely standardized
> Standardizes interfaces between applications, network layers and back-office systems	> Rigidly defined
> Delivers on the promise of wireless-wireline convergence	> A widely deployed mature platform
> Capable of being deployed with its full capabilities by AT&T	

What AT&T CARTS Will Deliver

1. Consistent user experience

2. Seamless transition between networks and devices

3. Single, common service platform, with uniform treatment of access technologies

4. Communications and entertainment that adapt to the customer's lifestyle

AT&T will begin introducing CARTS-enabled applications for residential and business customers later this year and will continue through 2008 and beyond. Following is an overview of the rollout road map.

2007	2008 and Beyond
> AT&T Video Share	> Continue to build new IMS-enabled services for consumer, wireless and enterprise markets
> IMS-enabled U-verse^{SM} Voice managed VoIP service	> Complete evolution of wireline and wireless networks to CARTS unified network
> VoIP IMS-enabled services and applications for enterprise customers	> Dual-mode service
> Beginning of long distance phone network migration to CARTS network	

Converged Services of the Future

The new-generation services delivered from AT&T's IMS CARTS architecture will enable business and residential users to work and communicate more efficiently and effectively than ever before. The combination of applications on a single device means that services that were once separate can now be consolidated to perform in ways that we wouldn't have thought possible a few years ago – a phone that can be a video home monitoring device or a TV that can be the messaging hub for voice, text or video communications.

Following is a snapshot of the types of services that both businesses and consumers could benefit from in the not-so-distant future.

Consumer Convergence Applications of the Future	Business Convergence Applications of the Future
> Video services and sharing	> Dual-mode phone
> Social networking	> PBX capabilities in remote locations, across many devices
> Music	> Video sharing
> Location-based service enabler	> Vertical applications
> TV voicemail	
> TV talking caller ID	
> TV wireless caller ID	
> Dual-mode phone	

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